

## Claims

1. An optical recording medium comprising:

a support substrate;

5 an optical transmitting layer; and

a first dielectric layer, a noble metal oxide layer, a second dielectric layer, a light absorption layer, and a third dielectric layer, all of which are interposed, in this sequence from said optical transmitting layer, between said optical transmitting layer and said support substrate,

10 wherein a thickness of said support substrate ranges from 0.6 mm to 2.0 mm; a thickness of said optical transmitting layer ranges from 10  $\mu\text{m}$  to 200  $\mu\text{m}$ ; a thickness of said noble metal oxide layer ranges from 2 nm to 50 nm; a thickness of said second dielectric layer ranges from 5 nm to 100 nm; a thickness of said light absorption layer ranges from 5 nm to 100 nm; and a thickness of said third dielectric layer ranges from 10  
15 nm to 140 nm.

2. The optical recording medium according to claim 1, wherein said noble metal oxide layer includes a platinum oxide (PtOx).

20 3. The optical recording medium according to claim 1 or 2, further comprising a reflection layer interposed between said support substrate and said third dielectric layer.

25 4. The optical recording medium according to claim 3, wherein a thickness of said reflection layer ranges from 5 nm to 200 nm.

5. An optical recording medium comprising:

a support substrate whose thickness ranges from 0.6 mm to 2.0 mm;

an optical transmitting layer whose thickness ranges from 10  $\mu\text{m}$  to 200  $\mu\text{m}$ ; and

30 a first dielectric layer, a noble metal oxide layer, a second dielectric layer, a light absorption layer, a third dielectric layer, and a reflection layer, all of which are interposed,

in this sequence from said optical transmitting layer, between said optical transmitting layer and said support substrate.

6. A method for manufacturing an optical recording medium comprising:

5 a first process of forming, on a support substrate, a reflection layer, a third dielectric layer, a light absorption layer, a second dielectric layer, a noble metal oxide layer, and a first dielectric layer, in this sequence; and  
a second process of forming an optical transmitting layer on said first dielectric layer.

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7. The method for manufacturing an optical recording medium according to claim 6, wherein processing pertaining to said first process is performed according to a vapor-phase deposition method, and processing pertaining to said second process is performed according to a spin-coating method.

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8. A data recording method for recording data on said above-described optical recording medium defined in any one of claims 1 to 5, by exposing the optical-transmissive layer to a laser beam, wherein,

20 when the wavelength of said laser beam is taken as  $\lambda$  and a numerical aperture of said objective lens used for focusing the laser beam is taken as NA, a record mark train including a record mark having a length of  $\lambda/4NA$  or less is recorded by setting  $\lambda/NA$  to a value of 640 nm or less.

9. A data reproduction method for reproducing data by exposing to a laser beam said optical recording medium defined in any one of claims 1 to 5 by way of said optical transmitting layer, wherein, when the wavelength of the laser beam is taken as  $\lambda$  and the numerical aperture of the objective lens for focusing the laser beam is taken as NA,  $\lambda/NA$  is set to a value of 640 nm or less to thus reproduce data from a record mark train having a length of  $\lambda/4NA$ .

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